Training Course:
AI-Powered Data Analysis: From Insights to Intelligence

17 - 21 August 2025
Cairo (Egypt)
Holiday Inn & Suites Cairo Maadi, an IHG Hotel

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AI-Powered Data Analysis: From Insights to Intelligence

Training Course code: SC236172 From: 17 - 21 August 2025 Venue: Cairo (Egypt) - Holiday Inn & Suites Cairo Maadi, an IHG Hotel Training Course Fees: 3875 ⊡ Euro

Introduction

In today□s data-driven world, Artificial Intelligence AI and Data Analysis are revolutionizing how organizations operate, innovate, and make decisions. While data analysis helps uncover insights from massive datasets, AI enhances these capabilities by identifying hidden patterns, predicting outcomes, and automating processes. The integration of both disciplines empowers businesses to evolve from descriptive analytics into predictive and prescriptive intelligence.

This 5-day professional training course, developed by Global Horizon Training Center, provides a practical foundation in AI-integrated data analysis. Participants will explore essential data workflows, apply machine learning models, and integrate AI APIs and tools to extract business value from data. The program blends conceptual knowledge with hands-on experience using tools like Python, Power BI, and AI services such as Azure or OpenAI APIs.

Real-world exercises and projects will guide participants through designing intelligent dashboards, automating insights generation, and building scalable models that support advanced business decisions.

Target Audience

This program is designed for:

- Data analysts and BI professionals integrating AI into analytical processes

- Software and IT professionals transitioning to data science roles

- Business managers aiming to enhance decisions with predictive analytics

- Executives and team leads interested in AI-driven innovation

- Professionals with a foundational knowledge of data analysis seeking to expand into AI applications

Objectives

By the end of this training, participants will be able to:

- Understand the principles of AI and its synergy with data analysis

- Preprocess and prepare data for AI modeling and decision-making

- Apply machine learning algorithms using Python and Scikit-learn

- Automate data pipelines and integrate AI tools/APIs into analytics platforms

- Build dashboards that provide real-time predictions and intelligent insights

- Communicate technical results and strategic findings effectively through reports

Outlines

Day 1: AI and Data Analysis Foundations

Topics:

- Introduction to AI, ML, and data analytics

- AI vs traditional analytics: Key distinctions

- Understanding structured and unstructured data

- Overview of tools: Python, Power BI, cloud AI platforms

- Introduction to AI data pipelines

Hands-on Activity:

- Set up Python and Power BI environment

- Basic data exploration and visualization

Day 2: Preparing Data for AI Models

Topics:

- Data preprocessing and feature selection

- Handling missing data and anomalies

- Encoding categorical variables

- Splitting data into training and test sets

Hands-on Activity:

- Clean and transform sample datasets using pandas and NumPy

- Create datasets ready for modeling

Day 3: Machine Learning for Prediction

Topics:

- Supervised vs. unsupervised learning

- Common algorithms: Logistic regression, decision trees, clustering

- Model training and validation

- Evaluation metrics: Accuracy, precision, recall, F1-score

Hands-on Activity:

- Build ML models with scikit-learn

- Predict business outcomes based on historical data

Day 4: Automation and AI Integration

Topics:

- Scripting automated analytics workflows

- Using AI APIs Azure Cognitive Services, OpenAI, etc.

- Embedding models into dashboards

- Building predictive dashboards in Power BI

Hands-on Activity:

- Automate a data pipeline with Python

- Integrate AI into a live dashboard

Day 5: Communicating AI Insights and Strategy

Topics:

- Visual storytelling with AI insights

- Communicating findings to non-technical stakeholders

- Final group project: Solving a business case using AI analytics

- Bias and ethics in AI

Hands-on Activity:

- Present a group project integrating AI and analytics

- Create a final report and stakeholder presentation

Registration form on the Training Course:
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